INTERIM REPORT

TO THE

AUDITOR GENERAL, STATE OF CALIFORNIA

CONCERNING

MEDICAL MALPRACTICE INSURANCE STUDY

Prepared By
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A Division Of
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Newport Beach, California
September 2, 1975

Joint Legislative Audit Committee

OFFICE OF THE AUDITOR GENERAL

California Legislature

MIKE CULLEN
CHAIRMAN

MEMORANDUM

DATE: September 10, 1975

TO: Members of the Legislature

FROM: Chairman, Joint Legislative Audit Committee

SUBJECT: ACR 83 (Medical Malpractice Insurance)

1. The formal report required by ACR 83 will not be completed until October.

2. This Interim Report contains data and evaluation to date by your Auditor General staff and by Booz-Allen Consulting Actuaries, a private actuary employed to assist in the evaluation. Your joint committee neither concurs nor non-concurs in its contents as the Committee will when it reviews the formal report prior to publication.

3. Highlights of the Interim Report to look for are as follows:

   a. Whether or not rate-setting was reasonable and prudent during the 15-year period, 1960-1974.

   b. Whether or not investment of doctors' funds in common stock should be regulated by the State of California.

   c. Whether or not the distribution of dividends by carriers nearing the knife-edge of insolvency should be regulated by the state.

   d. Whether or not increases in patient malpractice expenses of 42 cents per general practitioner visit, $1.99 for surgeon visit, and $9.16 for anesthesia application should be regulated by the State of California.

Cordially,

Mike Cullen

MIKE CULLEN

TABLE OF CONTENTS

SUMMARY

Our review of malpractice insurance for physicians practicing in California is not complete. Much of the data which we have accumulated to date remains to be verified and completely analyzed. Certain tentative conclusions are contained in this report. These conclusions and the page numbers of the report on which they appear are listed below:

Conclusions	Page Number
The seven insurance companies we reviewed collected $262 million in physicians' malpractice insurance premiums in California during the 15-year period 1960 through 1974 and paid out approximately $115 million in claims and claim expenses from this revenue through December 31, 1974.	8
On the basis of our review of the payments made by the companies we reviewed and the trend of these payments, we estimate that these carriers will ultimately pay out $183 million more than they collected in premiums for physicians' malpractice insurance coverage for the years 1960 through 1974. This projected loss does not include any provision for insurance companies' indirect expenses, investment earnings on premiums held, inflationary factors in the amounts of physician malpractice claims, or increases in claims frequency.	8

Conclusions	Page Number
Of the total paid claims costs of the insurance companies in our review, the claimants received approximately 56 percent or $64 million, attorneys received approximately 40 percent or $46.3 million, and direct costs other than legal, were approximately four percent or $4.3 million of the total payments.	9
Our preliminary evaluation of seven malpractice insurance carriers in California indicates their financial condition has undergone serious erosion over the last five years and they currently face insolvency.	17
The carriers reviewed have, over the last five years, shown a composite loss of -1.8 percent from underwriting operations for all lines of liability insurance.	18
The liability insurance carriers must increase premiums in order to improve their underwriting results. However, any increases in premiums without the injection of new capital will, on a temporary basis, increase risks to policyholders and further erode the financial condition of these carriers.	18

Conclusions	Page Number
The availability of physician malpractice insurance is being affected because the California Insurance Commissioner issued cease and desist orders effective September 10, 1975 precluding two companies which we have reviewed from writing any new policies or renewing any current policies due to insolvency and has advised another company we reviewed to restrict the writing of high risk lines of insurance, such as physician malpractice insurance.	18
If the cost of malpractice insurance for physicians is passed on to the patient, the cost per physician-patient contact at present insurance rates is estimated at between $.35 per contact for general practitioners and $11.54 per contact for anesthesiologists.	32
The Board of Medical Examiners has not promptly investigated and resolved alleged violations of the Medical Practice Act by physicians. In most cases the physicians had an unrestricted license to practice medicine until the effective date of the board's final order.	36

Conclusions	Page Number
The results of a survey of physicians, conducted as a part of this review, indicate that most doctors would submit malpractice claims to binding arbitration, would join a mutual insurance group formed by doctors, and have not reclassified their practice because of high insurance costs.	43
Appendix A - Interim Report to the Auditor General State of California Concerning Medical Malpractice Insurance Study	
Premiums paid by California doctors for medical malpractice insurance have increased dramatically over the past fifteen years, but have not kept pace with increasing claim costs.	1
The current malpractice crisis has been caused in part by poor pricing by the insurance industry, for premiums have increased erratically while claim cost increases have been relatively steady.	1
The insurance industry has collected more premium than it has paid in claims for medical malpractice insurance written in California over the past fifteen years, but future claim payments on past coverage will ultimately result in a severe net loss to the industry.	2

Conclusions	Page Number
Income on invested premium funds will alleviate the situation to some extent for the industry, but the net loss will remain severe.	2
The medical profession in California over the past fifteen years has paid an inadequate amount for its medical malpractice insurance coverage.	2

INTRODUCTION

In response to Assembly Concurrent Resolution No. 83 of the Regular Session of the 1975-76 California Legislature, we are reviewing the subject of malpractice insurance underwriting and claims as it affects physicians and surgeons in California. This interim report is being submitted to assist the members of the Legislature in their current deliberation on proposed legislation intended to affect the availability and cost of malpractice insurance for physicians. A final report containing more comprehensive analyses of the data will be issued later.

In conducting this study we have contacted major insurance carriers in the state which have written malpractice insurance over the last 15 years. We have reviewed and analyzed available documentation, including annual statements filed with the Insurance Commissioner, supporting premium income and loss data maintained by these companies. We have received excellent cooperation and support from the insurance companies.

In addition to the insurance companies we have contacted representatives of the California Medical Association, the California Trial Lawyers Association and the California Department of Insurance. Booz-Allen Consulting Actuaries have been contracted to assist in the audit investigation. Although we have not received a final report from this firm, data from an interim report is included in this report.

SUMMARY OF MEDICAL MALPRACTICE INSURANCE PREMIUMS COLLECTED AND PAYMENTS MADE

During our review, we obtained information relating to premiums collected and amounts paid by seven insurance companies for expenses directly attributable to claims and for indemnity of plaintiffs. The companies reviewed include current carriers of malpractice insurance and some that have a long history in the field but which are no longer writing malpractice insurance in California. Most of the information on total premiums and payments was taken from unaudited documents of the companies and is for the 15-year period 1960 through 1974. We reviewed approximately 1,000 closed claims; some of the information on total costs is projected from an analysis of this sample.

- The seven insurance companies we reviewed collected $262 million in physicians' malpractice insurance premiums in California during the 15-year period 1960 through 1974 and paid out approximately $115 million in claims and claim expenses from this revenue through December 31, 1974.

- On the basis of our review of the payments made by the companies we reviewed and the trend of these payments, we estimate that these carriers will ultimately pay out $183 million more than they collected in premiums for

physicians' malpractice insurance coverage for the years 1960 through 1974. This projected loss does not include any provision for insurance companies' indirect expenses, investment earnings on premiums held, inflationary factors in the amounts of physician malpractice claims, or increases in claims frequency.

- Of the total paid claim costs of the insurance companies in our review, the claimants received approximately 56 percent or $64 million, attorneys received approximately 40 percent or $46.3 million, and direct costs, other than legal, were approximately four percent or $4.3 million of the total payments.

Table I on page 12 summarizes premiums earned and payments made for the 15-year period by the seven companies we reviewed. For the period 1960 through 1974, the insurance companies earned $262,034,000 in premiums and paid out $114,663,000, or $147,371,000 less than was collected In each year between 1960 and 1974, the premiums collected during a year have exceeded the claim payments made during the year. However, when claim payments are related to the year of insurance (policy year), the schedule shows that as of December 31, 1974 the insurance companies have paid out more in losses for the years 1963 through 1968 than they received in premiums for those years. The claim payments by policy year also indicate that there is a "tail" in medical malpractice insurance, but they do not show the length of the tail. A tail refers to the length of time it takes to settle all

claims against an insurance policy written during a year. As an example, if it takes 16 years to settle the last claim against the premiums collected in one policy year, it is not known if the claim payments will exceed the premiums until 16 years after the policy is written.

As an example of the long payout tail, Table 2 on page 13 isolates policy year 1965 premiums and paid claims. The initial payouts charged against this policy year are relatively small; however, the amounts of the annual payout increase until the seventh year, 1972. The total amount to be paid for claims generated in policy year 1965 is still not known. The insurance companies have estimated that an additional $1,131,000 will be paid out on the claims that have been reported to them for policy year 1965 but which have not been settled as of December 1974.

We have analyzed the payments made by the insurance companies we reviewed and the trends of these payments, and have compared this data to premiums earned during each of the policy years 1960 through 1974. As a result of this analysis, we estimate that these companies will pay claims and expenses of approximately 170 percent of the premiums earned for each policy year within 11-1/2 years after the policy year. Applying the percentage to the $262 million premiums earned by the companies reviewed results in ultimate losses of $183 million. These estimated losses do not include administrative costs or earnings from investment of funds which are available to the companies. In addition, we have made no allowances for increases in claim frequency or inflation.

Booz-Allen Consulting Actuaries has used information gathered in this review and projected ultimate losses to the malpractice insurance industry in the state for the 15 years covered in this review at $400 million. Their estimate includes an allowance for investment income, deduction of administrative costs and actuarial adjustments for increases in claim frequency and of costs due to inflation. The interim report of the consulting actuary is included as Appendix A of this report.

TABLE 1

SUMMARY OF PREMIUMS EARNED FOR
PHYSICIAN MALPRACTICE INSURANCE
COMPARED TO ACTUAL CLAIMS PAID BY
INSURANCE COMPANIES REVIEWED
1960 THROUGH 1974

			Policy Year		Calendar Year	
Year	Doctors Insured	Premiums Earned	Claims Paid For the Year	Under (Over) Premiums Earned	Claims Paid During the Year*	Under (Over) Premiums Earned
1960	3,870	$ 1,731,000	$ 1,591,000	$ 140,000	$ 2,000	$ 1,729,000
1961	3,830	1,711,000	1,277,000	434,000	1,000	1,710,000
1962	3,810	1,746,000	1,689,000	58,000	1,000	1,746,000
1963	9,990	3,942,000	4,942,000	(1,000,000)	4,000	3,938,000
1964	10,990	4,474,000	6,105,000	(1,631,000)	20,000	4,454,000
1965	11,660	4,850,000	7,955,000	(3,105,000)	372,000	4,478,000
1966	12,950	6,035,000	10,980,000	(4,945,000)	982,000	5,052,000
1967	15,220	8,570,000	14,294,000	(5,724,000)	1,567,000	7,003,000
1968	17,420	13,914,000	14,633,000	(719,000)	3,313,000	10,601,000
1969	18,160	24,810,000	16,128,000	8,681,000	3,124,000	21,686,000
1970	16,090	29,937,000	13,613,000	16,324,000	5,568,000	24,370,000
1971	18,030	35,607,000	13,609,000	21,998,000	12,274,000	23,333,000
1972	18,890	36,442,000	6,185,000	30,257,000	19,608,000	16,834,000
1973	19,430	40,623,000	1,239,000	39,383,000	29,805,000	10,817,000
1974	18,330	47,642,000	423,000	47,220,000	38,022,000	9,620,000
Total	198,670	$262,034,000	$114,663,000	$147,371,000	$114,663,000	$147,371,000

* None of the claims paid related to malpractice insurance written for years prior to 1960.

TABLE 2

POLICY YEAR 1965
CLAIMS PAYMENT BY YEAR

	Yearly Payout	Cumulative Payout	
Premiums earned in 1965			$4,850,000
Payouts during years:			
1966	$ 92,000	$ 92,000	
1967	243,000	335,000	
1968	483,000	818,000	
1969	817,000	1,635,000	
1970	1,265,000	2,900,000	
1971	1,053,000	3,953,000	
1972	1,364,000	5,317,000	
1973	1,234,000	6,551,000	
1974	776,000	7,327,000	
End of policy year to 12/31/74	628,000	7,955,000	7,955,000
Payout in excess of premium earned			$3,105,000

Allocation of Paid Claim Costs

For the seven companies which we reviewed, $114,663,000 in claim costs were paid during the 15-year period 1960 through 1974. We reviewed all 253 closed claims which resulted in payments during this period of $100,000 or more. In addition, we reviewed approximately 100 claims with settlements of less than $100,000 for each of the companies reviewed. These claims represented $50,798,000 in payments, or 44 percent of the total claim payments for these companies during the period reviewed.

Total claim payments include two elements:

- Indemnity costs represent monies paid to claimants as compensation for losses or suffering incurred. These include any amounts paid by the claimants for legal assistance.

- Direct claim costs are expenses specifically related to individual claims. These primarily include investigative work, claims adjustors, expert witnesses, and legal defense cost.

Disposition of the Claim Payments On Claims of $100,000 and Over

Our review of the 253 closed claims of $100,000 and over accounted for $47,010,000 of the total $50,798,000 reviewed. The disposition of these dollars is shown below:

Indemnity	$43,249,000	92%
Direct Claim Cost	3,761,000	8%
Total	$47,010,000	100%

Of the $3,761,000 direct claim costs, $2,821,000 in legal costs represents 75 percent of the direct claim costs and 6 percent of the total claim costs.

Disposition of the Claim Payments
On Claims Under $100,000

The composition of the dollar paid was somewhat different in claims that were settled for less that $100,000.

Indemnity	$52,769,000	78%
Direct Claim Cost	14,884,000	22%
Total	$67,653,000	100%

Of the total $14,884,000 direct claim costs, $11,501,000 was for legal expenses. The insurance companies' legal costs represent 17 percent of the total amount expended for claims in this category.

Legal Cost

The total cost for legal defense paid by the insurance companies was $14,322,000 or 12.5 percent of the total paid on all closed claims. The cost to the claimants for prosecuting their claims can be estimated based upon a percentage of the total indemnity paid to claimants. An estimate of the amount paid to claimants' attorneys, on a contingent fee basis, is one-third of the total amount paid to claimants, or approximately $32,000,000. This brings the total cost for legal services to $46,322,000, or approximately 40 percent of the total amounts paid.

Indirect Claim Costs

Total claim payments shown above do not include indirect claim costs which are expenses incurred by insurance companies that do not relate directly to individual claims. These costs vary from company to company, but the industry average is estimated at 15 percent of the gross premium dollar. The composition of this cost is as follows:

Gross Premium Tax	2.35%
Sales Commission	6.00%
Administration	6.65%
Total	15.00%

The premium tax rate is established by law. The sales commissions are paid to agents of the company or brokers, and the percentage paid varies depending on the agreement between the parties. Administrative cost would include company overhead items. No provisions were made for profit or contingencies in our estimates.

Allocation of Total Claim Payments of Companies Reviewed

An allocation of total claim payments for the period 1960-1974 made by the companies reviewed is as follows:

Indemnity to claimant	$64,018,000	
Add: Plaintiff legal fees	32,000,000	
Total Indemnity Paid		$ 96,018,000
Direct claim cost other that legal	$ 4,323,000	
Add: Defense legal fees	14,322,000	
Total Direct Costs		18,645,000
Total Claim Payments		$114,663,000

THE EFFECT OF PORTFOLIO VALUATION PROCEDURES ON THE FINANCIAL POSITION OF MALPRACTICE INSURERS

In order to determine whether investment losses had been included in the setting of physician malpractice insurance rates, we reviewed the investment portfolios and their effect on the financial condition of seven liability insurance companies that have written or are writing physicians' malpractice insurance in California.

Because these companies have experienced underwriting losses for a five-year period ending December 31, 1974, we have concluded that investment losses could not have been included in determining insurance premiums.

Because of the potential for investment income to insurance companies from the investment of malpractice insurance premiums prior to payment to claimants, and the need to be competitive in order to obtain a share of the insurance business, the insurance companies may have intentionally charged inadequate rates for malpractice insurance The inadequacy may have been caused by the anticipation that a portion of the investment income would offset the insurance losses. However, unrealized losses from common and preferred stock investments negated the potential investment income earned and the insurance companies may now have to charge adequate rates for insurance without consideration of investment income.

- Our preliminary evaluation of seven malpractice insurance carriers in California indicates their financial condition has undergone serious erosion over the last five years and they currently face insolvency.

- The carriers reviewed have, over the last five years, shown a composite loss of 1.8 percent from underwriting operations for all lines of liability insurance.

- The liability insurance carriers must increase premiums in order to improve their underwriting results. However, any increases in premiums without the injection of new capital will, on a temporary basis, increase risks to policyholders and further erode the financial condition of these carriers.

- The availability of physician malpractice insurance is being affected because the California Insurance Commissioner issued cease and desist orders effective September 10, 1975 precluding two companies which we have reviewed from writing any new policies or renewing any current policies due to insolvency and has advised another company we reviewed to restrict the writing of high risk lines of insurance, such as physician malpractice insurance.

The potential insolvency of these companies has been brought about primarily by common and preferred stock investments made with policyholders' funds and the procedures used for valuing the investment portfolio.

As the solvency of the entire casualty-liability insurance industry may be affected, a more detailed study of the financial condition, considering valuation procedures and review of investment authority, may be in order.

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Unrealized losses from common and preferred stock investments of fire and casualty (liability) insurance companies have directly eroded the financial position of these companies. Indirectly, valuation procedures used may result in increased insurance premiums for all lines of liability insurance, particularly for malpractice insurance. However, rate increases will further erode the financial condition of these companies temporarily and will result in increased risks to policyholders.

The Insurance Commissioner of the State of California has adopted for insurance companies that issue malpractice insurance policies the "Valuation Procedures for Bonds and Stocks" issued by the Securities Valuation Office of the National Association of Insurance Commissioners. This results in bond investments carried at amortized book value while common and preferred stock investments are carried at market value.

The annual changes in market value of common and preferred stock investments still owned are then recognized by the insurance companies as if the investments had actually been disposed of by increasing or decreasing their surplus accordingly.

In liability insurance companies, which include those that issue malpractice insurance, surplus is technically referred to as policyholders' surplus (PHS). PHS, therefore, consists of all capital and surplus invested in the insurance company by the stockholders plus miscellaneous other special surplus funds, all of which have the effect of being invested in the business by the stockholders.

PHS is one of the most critical measures of the solvency of an insurance company. To the extent PHS is less than the minimum required capital to do business in California, the company will be declared insolvent by the Insurance Commissioner and put into conservatorship. Also, PHS is used to establish various ratio tests to determine the risk to policyholders. Among the 11 solvency test ratios, the most commonly used test is the ratio of net insurance premiums written to PHS. Presently, the Insurance Commissioner considers as a rule of thumb a ratio of $3 to $1 acceptable. However, this ratio has deteriorated since it was $1 to $1 in the mid-40s, $2 to $1 in the 60s, and $3 to $1 in 1974.

As a composite, for those companies we have analyzed which issue or have issued malpractice insurance for physicians in California, this ratio was $4.30 to $1 as of December 31, 1974.

In addition to the deterioration of the ratio of net insurance premiums written to PHS, PHS may be reduced to zero if further declines in the market values of common and preferred stock investments owned by these companies occur, even though present market values are in excess of historical cost. Increases in premiums will further deteriorate the ratio of net insurance premiums written to PHS and expose policyholders to greater risks, at least on a temporary basis.

The financial solvency of liability insurance companies that have written or are writing malpractice insurance in California is in jeopardy. Further, this condition may affect the entire liability insurance industry. On August 11, 1975, A. M. Best Co. announced that 24 percent

of 1,000 liability insurance companies have been downgraded because of massive underwriting and stock market losses in 1974. This was the largest number of reduced ratings in the liability insurance industry since the Depression era. A. M. Best Co. is considered the primary rating service for the liability insurance industry. Industry officials state that the "Best" rating affects their banking costs, clientele, and various other factors important to the viability of their companies.

On September 10, 1975, the Insurance Commissioner of the State of California found two insurance companies of seven we have reviewed to be insolvent. These companies have been ordered to stop writing or renewing any insurance policies. The Insurance Commissioner has informed us that another insurance company in our review has been requested to restrict writing of riskier lines of insurance, such as malpractice insurance.

In discussions with the Insurance Commissioner, we were told that if the market value of common and preferred stock investments owned by these companies were to materially increase, the companies would no longer be found to be insolvent.

Characteristics of the Rate-Making Process of Liability Insurance Companies

The liability insurance industry, through actuarial science, estimates the losses from a given line of insurance. Further, it is permitted to include for rate-making purposes the expenses necessary to pay these losses, including administrative expenses, taxes, clerical expenses and a reasonable profit.

Characteristics of Malpractice Insurance Premiums as Opposed to Other Lines of Liability Insurance And Its Effects on Investments

Malpractice insurance premiums, as with other liability insurance premiums, are collected in advance for the period of coverage. The insurance companies may invest the premiums prior to their need to be paid to individuals making claims for damages.

However, malpractice insurance premiums remain with the liability insurance companies much longer than other lines of liability insurance such as fire, automobile and bodily injury. This is because of the number of years it takes to discover the injury and/or the time to complete the claims settlement process which is generally prolonged by litigation.

The following table illustrates the potential investment earnings to liability insurance companies from the use of premiums prior to their payment:

Potential Investment Earnings Available To Liability Insurance Companies from $1.00 Of Insurance Premiums Prior to Payment to Claimants

Type Of Liability Insurance	Estimated Time Premiums Invested	Estimated Pre-Tax Earning Rate	Amount $1.00 Invested Will Provide Compounded Annually 1/
Fire	11 months	5%	$.03
Auto & bodily injury	1 year 1 month	5%	.04
Malpractice	5 years	5%	.26

1/ Insurance premiums written are recorded in an unearned premium account and are amortized daily until the expiration of the insurance period. Certain expenses are immediately paid for by the insurance companies which result in the temporary use of PHS. Therefore, we estimate that only 75 cents of each dollar are available for investment the first year for auto and fire and 80 cents for malpractice.

The long period of time between collection of malpractice insurance premiums and the payment of claims provides the potential for more investment income than for other lines of liability insurance, and simultaneously permit the accumulation of significant cash reserves. The accumulation of these cash reserves permits the opportunity for liability insurance companies writing malpractice insurance to consider higher risk reward investments such as common stocks which otherwise might not have been purchased, or in the same degree as would have been invested with fire or auto premiums.

The Investment Portfolio of the Liability Insurance Industry as of December 31, 1973

The following table illustrates the size of the entire liability insurance industry investment portfolio and the amount of money which was provided by policyholders:

Investment Portfolios of 913 Fire and Casualty Insurance Companies and Other Selected Financial Data As of December 31, 1973

Total Investment Portfolios	PHS	Loss Reserves and Unearned Premiums[2/]
$44.9 billion	$14.1 billion	$32.8 billion

The leverage potential in the liability insurance industry is significant. For every dollar of PHS, $3.18 was invested. Therefore, policyholders

2/ Source of data: "The Erosion in the Financial Position of Fire and Casualty Companies", prepared by Theodore J. Newton, Jr., Analyst, Blyth Eastman Dillon. However, per footnote 1/ on page 22, we calculated unearned premium reserve at 75 percent of the figure reported by Mr. Newton.

provided $2.18 which was directly invested. Pre-tax investment income at an assumed five percent rate is potentially 16 percent annually. This does not consider the compounding of investment income or the potential for increase or decrease from changes in the market value of common stocks owned. However, loss reserves and unearned insurance premiums more accurately represent total funds provided by policyholders. Therefore, policyholders' funds actually permitted $2.33 as available for investment in addition to PHS.

The leverage also creates a solvency risk to the industry should the value of common and preferred stocks owned decline. As of December 1973, the value of common and preferred stock investments owned was $16.2 billion. The ratio of common and preferred stock investments owned to PHS was $1.15 to $1.00. A 10 percent reduction in the market value of common and preferred stocks owned would reduce the PHS by 11-1/2 percent.

The Risks of the Liability Insurance Industry

The only inherent risk of the liability insurance industry should be the inability to accurately estimate the losses and expenses necessary

to pay claims. To the extent these losses are underestimated, the loss is absorbed by the stockholders, not the policyholders.

As a means to offset these risks, provide additional profits and attract capital, the liability insurance industry makes investments.

The Risks of Valuation of Common and Preferred Stocks at Market Value

The recognition of annual changes in the market value of common and preferred stocks permits a roller-coaster effect on PHS.

When the general prices of securities rise, the liability insurance industry recognizes this by increasing their PHS accordingly. The Insurance Commissioner also recognizes this and has stated he would not question an insurance company writing new insurance business and incurring added insurance risks. However, because this is not permanent-type capital, a decline in the market value the following year would result in deterioration of the financial condition of the insurance companies as determined by one of the solvency measures used by the Insurance Commissioner.

Over the years, this procedure has permitted insurance companies to take on insurance risks without having invested permanent capital. However, when common and preferred stocks experience sharp and continued decline such as has been experienced recently, a possibility exists that the industry could be declared insolvent even though the actual market value of the common and preferred stock investments is greater than their historical cost. Such a possibility exists today, because the regulation regarding investment in common and preferred stocks does not consider the negative leverage effect this procedure could have on the industry.

Limitation of Investment Risk For Liability Insurance Companies

Section 1190 of the California Insurance Code requires investment in certain securities or in deposit in a national or state bank equal to the minimum paid-in capital. The minimum paid-in capital in California for multiple lines companies is $1 million. Common and preferred stocks are not eligible for purchase under this requirement.

However, investments over the $1 million minimum requirement are considered excess investments and common and preferred stocks are eligible. Therefore, subject to regulations regarding the maximum amount invested in the common and preferred stock of a single corporation, a liability insurance company may, after three years of operation, invest all excess funds in common and preferred stocks. Thus, it is permissible to use policyholders' funds for these investments and subject them to the investment risk which could result in the insolvency of the insurance company due to fluctuating economic conditions.

The Financial Position of Liability Insurance Companies That Have Written Or Are Writing Malpractice Insurance in California

The question of investment losses being included in rates for malpractice or any other type of liability insurance for the period 1970 through 1974 is best answered by the results of these companies.

Preliminary Analysis of the Financial Results of a Composite of Insurance Companies that have Written or Are Writing Malpractice and Other Lines of Liability Insurance in California for the Period 1970-74

Net premiums written	$3,749,614,000
Net premiums earned	$3,652,967,000
Statutory pre-tax underwriting income (loss reported)	$ (92,827,000)
Pre-tax underwriting rate of return (loss)[3/]	(1.8%)
Pre-tax net investment income (loss[4/])	$ 285,157,000
Reported net income (loss) after tax	$ 78,997,000
Common stocks dividends paid	$ 108,849,000
Average policyholder surplus	$ 376,765,000

3/ Rate determined by calculation of: (1) ratio of combined losses and loss of adjustment expenses incurred to earned premiums; and (2) ratio of underwriting expenses incurred to written premiums.

4/ Certain insurance programs, primarily workmen's compensation, may be issued with participation clauses. This results in the payment of dividends to policyholders as a profit share if there are any. During the 1970-74 period, $122,297,000 of such dividends were declared and paid with pre-tax net investment income.

The statutory underwriting losses reported are not indicative of actual losses incurred. Statutory insurance accounting recognizes all expenses paid in a year as chargeable to earned premiums while insurance companies do not actually earn all premiums written in the current year. The reported 1.8 percent rate of loss above has adjusted for this.

The insurance companies analyzed show a five-year composite loss from underwriting although profits would have been permissible under the rate-making process. Further, the overall after-tax profit reported, which includes investment earnings, underwriting and all other operations, is equivalent to a 3.88 percent compounded rate of return on PHS for the five-year period.

The operating results of these companies demonstrate that a windfall or excessive profit was not earned by these companies. However, these results do not clearly reflect the severe financial strain which has been put on these companies and how the leverage of their investment portfolio may result in their insolvency.

Effects on Policyholders Surplus 1970-74
Due to Unrealized Losses From
Common and Preferred Stock Valuations
Of Composite Liability Insurance Companies That Have
Written or Are Writing Malpractice Insurance in California

Policyholders surplus 1/1/70		$290,944,000
Add:	Reported net income after tax 1970-74	$ 78,997,000
	Capital paid in by stockholders 1970-74	$ 2,082,000
	Net surplus adjustments 1970-74	$ 62,546,000
Deduct:	Net other miscellaneous adjustments 1970-74	($1,816,000
	Common stock dividends paid 1970-74	($108,849,000
Estimated policyholders surplus 12/31/74 (without consideration of unrealized losses from common and preferred stock)		$323,904,000
Actual policyholders surplus 12/31/74		$206,147,000
Unrealized losses from common and preferred stocks 1970-74		$117,757,000

Due to unrealized losses from common and preferred stock investments owned by casualty insurance companies, $117,757 million, or 36.4 percent of PHS, has been eliminated, although the actual market value of common and preferred stocks was 10 percent greater than historical cost.

Effects on PHS

The liability insurance industry's capacity to write insurance and the policyholder's measure of safety was materially affected in 1974 as demonstrated below:

Ratio of Net Premiums Written to PHS
Of Composite Liability Insurance Companies
Who Have Written or are Writing
Malpractice Insurance in California

Year	Net Premiums Written (NPW)	PHS	Ratio NPW/PHS
1970	$611,489,000	$306,672,000	2:0
1971	702,014,000	398,516,000	1:8
1972	756,156,000	513,041,000	1:5
1973	798,658,000	459,449,000	1:7
1974	881,296,000	206,147,000	4:3
5-Year Average	$749,923,000	$376,765,000	2:0

The unrealized losses from common and preferred stocks in 1974 amounted to $108.967 million, or 43 percent of the reduction in PHS in 1974. However, the current market value of common and preferred stocks was 10 percent greater than their historical cost.

More serious than the capacity to write new business is the risk of further market value declines of common and preferred stocks in the composite liability insurance companies investment portfolio. Another 20 percent decline in the market value of these securities would reduce PHS by 35 percent as illustrated in the tables below.

Effects of PHS of Composite Liablity Insurance Companies If Market Value of Common and Preferred Stocks Decline

Investment Portfolio of Composite Liability Insurance Companies 12/31/74

Description of Securities	Actual Cost	Market Value	Rate of Return From Investments Before Taxes & Expense: Cost	Market
Bonds	$ 916,863,000	$ 922,064,000	6.62%	6.58%
Preferred stocks	77,363,000	57,468,000	8.22%	9.67%
Common stocks	252,108,000	306,363,000	3.26%	2.82%
Total	$1,246,334,000	$1,285,895,000	5.91%	5.72%

As of December 31, 1974, the PHS of the composite liability insurance companies was $206.147 million. To determine the risks further market value declines will have on PHS, it is necessary to determine the dollars invested at market value in relation to PHS. This percentage can then be multiplied by assumed declines in market value of common and preferred stocks to determine the reduction to PHS.

	Dollars Invested at Market Value in Relation to PHS	Reduction to PHS Assuming Declines In Market Value of Common and Pre-Preferred Stocks: 10%	20%	30%
Bonds (amortized book value)	$4.47			
Preferred stocks	.28	2.80%	5.60%	8.40%
Common stocks	1.49	14.90%	29.80%	44.70%
Total investment portfolio	$6.24	17.70%	35.40%	53.10%

Further declines in the market values of common and preferred stocks owned may result in the insolvency of certain liability insurance companies in our composite.

In addition to the investment risk because of the valuation procedures used, the insurance companies have the risk of not having estimated their future claims correctly.

As of December 31, 1974, the composite liability insurance companies had $990.9 million of estimated future claims to be paid from insurance sold. The ratio of estimated claims to PHS is $4.81 to $1. Therefore, if the claims are underestimated by ten percent, PHS will be reduced by 48 percent.

The solvency of the composite liability companies as of December 31, 1974, is in jeopardy. The leveraged investment and estimated claims position may result in the financial collapse of these companies. Further, it is necessary to review the financial position of the entire liability insurance industry as this condition may affect the entire industry.

RELATIONSHIP OF PHYSICIAN GROSS INCOME TO PROFESSIONAL LIABILITY INSURANCE PREMIUMS

Medical malpractice insurance has traditionally been a small percentage of gross income of physicians. The costs of this insurance have increased substantially during 1975.

- If the cost of malpractice insurance for physicians is passed on to the patient, the cost per physician-patient contact at present insurance rates is estimated at between $.35 per contact for general practioners and $11.54 per contact for anesthesiologists.

The American Medical Association's 1973 Profiles on Medical Practice shows that, for 1971, professional liability insurance nationwide accounted for 1.2 percent of physicians' gross income and that office supplies and services accounted for 1.8 percent. An analysis comparing medical malpractice rates in Northern California to nationwide average physician income indicates the percentage to be approximately one percent higher, or 2.1 percent of gross income, in 1971.

Northern California medical malpractice insurance rates increased an average of approximately 16 percent from 1971 to 1974, while the nationwide average fees charged by physicians increased an average 22 percent from 1970 to 1973. Comparable fee data was not available for the year 1974 and we

assumed that the rate of fee increases experienced in 1970 to 1973 would be comparable for 1971 to 1974.

Based on the results of a physician survey conducted as a part of this review, the professional liability premiums during policy year 1975 account for approximately 6.69 percent of physicians' gross income in California.

Average Medical Malpractice Insurance Cost
Per Patient Visit Comparing Years 1973 and 1975

A nationwide average number of patient visits produced per year by individual office-based physicians was developed using statistics from the American Medical Association's Profiles on Medical Practice for 1974. This average annual physician-patient contact was then used to determine the average cost for physician-patient contact for professional liability insurance. The nationwide average number of annual patient visits was used as California data alone was not available.

Computations were made comparing policy limits of $100,000/300,000 and $1 million/3 million for policy years 1973 and 1975 for Northern California. This comparison is made to show the average cost increase per physician-patient contact before and after the large increase in professional liability insurance premiums. Table 3 depicts on Page 34 this information.

The average cost of professional liability insurance per physician-patient contact for general practice has increased from $0.07 to $0.35 for $100,000/300,000 policy limits and from $0.11 to $0.53 for $1,000,000/3,000,000 policy limits. The average cost has increased correspondingly for the higher risk specialties with the anesthesiology classification increasing the average physician-patient contact cost

from $1.58 to $7.66 for $100,000/300,000 policy limits, and an increase increase from $2.38 to $11.54 for $1,000,000/3,000,000 policy limits.

A percentage of the increase may be passed on to group and individual health insurance carriers and to the state for Medi-Cal recipients. In such event, the State Department of Health will have to take this additional physician cost into consideration in determining rates paid for Medi-Cal beneficiaries.

TABLE 3

AVERAGE MEDICAL MALPRACTICE INSURANCE
COST PER PHYSICIAN-PATIENT CONTACT
FOR NORTHERN CALIFORNIA
FOR YEARS 1973 AND 1975

Medical Specialty	1973 Policy Limit $100,000/ 300,000	1973 Average Visit Cost	1973 Policy Limit $1,000,000/ 3,000,000	1973 Average Visit Cost	1975* Policy Limit $100,000/ 300,000	1975* Average Visit Cost	1975* Policy Limit $1,000,000 3,000,000	1975* Average Visit Cost	Limit Cost Increase Over 1973	Limit Cost Increase Over 1973
General Practice:										
Annual Premium	$ 652	$0.07	$ 983	$0.11	$ 3,168	$0.35	$ 4,772	$0.53	$0.28	$0.42
Average Number of Annual Patient Visits	8,944		8,944		8,944		8,944			
Surgery:										
Annual Premium	$2,070	$0.34	$3,120	$0.51	$10,052	$1.66	$15,148	$2.50	$1.32	$1.99
Average Number of Annual Patient Visits	6,061		6,061		6,061		6,061			
Obstetrics-Gynecology:										
Annual Premium	$3,105	$0.49	$4,676	$0.74	$15,076	$2.40	$22,704	$3.61	$1.91	$2.87
Average Number of Annual Patient Visits	6,289		6,289		6,289		6,289			
Anesthesiology:										
Annual Premium	$3,105	$1.58	$4,676	$2.38	$15,076	$7.66	$22,704	$11.54	$6.08	$9.16
Average Number of Annual Patient Visits	1,968		1,968		1,968		1,968			

* The 1975 premium figures are for the county medical societies with the highest premiums.

REGULATION OF PHYSICIANS' PRACTICES

The Board of Medical Examiners is responsible for enforcing the Medical Practice Act of the Business and Professions Code. This act prescribes the licensing procedures for physicians and empowers the board to monitor licensees to assure that their professional conduct and quality of medical care meet the standards detailed in the act.

The California Trial Lawyers Association stated, in a position paper dated February 7, 1975, that "Lawyers do not create malpractice, or any other type of injury cases. The medical profession, as with any other industry or profession, contains a small percentage of people who practice their profession carelessly and harm members of the public."

A report of the Office of the Auditor General entitled "Disciplining of Physicians by the Board of Medical Examiners" (236.1) was released on August 11, 1975. The report contained the following findings and other information:

- The Board of Medical Examiners has not promptly investigated and resolved alleged violations of the Medical Practice Act by physicians. In most cases the physicians had an unrestricted license to practice medicine until the effective date of the board's final order.

- The board has not made full and prompt use of malpractice insurance reports to identify physicians who may be practicing in an incompetent or grossly negligent manner.

- The board has not issued regulations requiring reports from state-licensed hospitals on physicians whose hospital privileges have been limited or terminated.

Investigation and Resolution Of Reported Violations

For the period of review, calendar year 1974 and the first four months of 1975, the time from authorization of investigation to final action by the Board of Medical Examiners ranged from nine months to over seven years. The median time of these cases was approximately two and one-half years. The time to complete the disciplinary process is significant because in most cases the physician has an unrestricted license to practice medicine until the effective date of the board's final order.

During 1974 the Board of Medical Examiners took action against 50 physicians, which represents about one-tenth of one percent of the physicians practicing in the state. Only one physician was disciplined for incompetence and/or gross negligence during 1974.

The review found that there is a delay by insurance companies in the reporting of malpractice judgments and settlements to the Board of Medical Examiners, and also a delay in promptly opening investigations based on the insurance company reports.

Insurance companies are required by law to notify the Board of Medical Examiners of all malpractice judgments and settlements in excess of $3,000. The board has not actively enforced the law and all insurance companies do not report. Of those malpractice judgments and settlements reported, the board has a policy of investigating all of those over $50,000 and ten percent of those under $50,000 for possible incompetence and/or gross negligence. To be reported to the board the claim must have been settled (our current study shows this may take from 2 to 22 months). The insurance companies are required to report annually, which would increase to 34 months the time between a malpractice claim and the date it is reported to the board. The study indicated there were additional delays in some cases in the Board of Medical Examiners of up to nine months because the investigations by the board were not opened promptly.

Failure to open investigations immediately could permit incompetent and/or grossly negligent physicians to practice with a valid license for a long period of time.

Reporting of Physicians Whose Hospital Privileges Have Been Limited or Terminated

Hospitals represent one of the few places where physicians practice their profession under the scrutiny of their peers and with routine internal reviews of medical practices. These reviews can include internal audits of diagnosis and treatment, pathological reviews of tissues removed in surgery, and review of emergency room care and treatment. A pattern of irregular practices or unprofessional conduct by a physician, or an individual instance of grossly improper treatment, can result in termination of hospital staff privileges.

Reports of disciplinary action limiting or terminating a physicians's hospital privileges can be a valuable source of information on possible improper medical practices.

Currently the board receives reports from hospital medical staffs on the practices of their members sporadically and solely at the discretion of the individual hospitals.

During the course of the review, we found cases under investigation which had been sent to the board by concerned hospital officials. These cases represented less than three percent of the cases the board referred for investigation in the first five months of 1975.

INCOME TAX EFFECTS ON MALPRACTICE INSURANCE CARRIERS

The aggregate statewide medical malpractice experinece, as developed by the actuarial firm of Booz-Allen Consulting Actuaries, based on information we obtained during our audit, shows that the insurance industry will sustain an ultimate net loss of $400 million from premiums collected during the 15-year period, 1960 through 1974.

- Up to 48 percent, or $192 million, of the projected ultimate losses which insurance companies will sustain on physicians' malpractice insurance coverage for the period 1960 through 1974 may be recouped by the companies through provisions of the Internal Revenue Code which allow net operating losses to be offset against taxable income earned by the carrier.

- Under California's method of taxing insurance companies, increases in premium rates result in greater tax revenues even if the companies experience losses because the state tax is based upon a percentage of gross premiums earned.

Federal Income Tax

The severity of this loss to individual carriers of malpractice insurance is dependent upon each carrier's ability to receive the full tax benefit provided by Section 172(a) of the Internal Revenue Code which allows net operating losses to be deducted in computing taxable income for

any taxable year. Assuming all carriers received the full tax benefit provided by the net operating loss deduction, the projected industry net loss after allowance for full tax benefits is reduced approximately $192 million, from $400 million to $208 million.

The tax benefit provided by the net operating loss deduction, as explained below, has the effect of reducing the amount of federal income taxes which would otherwise be required to be paid except for the allowance of this deduction as an offset against other taxable income.

To the extent that a medical malpractice insurance carrier sustains a net operating loss in any year of operation, this loss, for federal income tax purposes may be offset against other taxable income earned by the carrier, if any. If no other taxable income is earned by the carrier, or if the amount of malpractice operating loss exceeds the amount of other taxable income, then the excess loss may be offset against the carrier's taxable earnings of the three preceding years. If the amount of net operating loss still exceeds the amount of other taxable income, the amount of the unrecouped loss may be offset against the carrier's taxable income during the five succeeding years. In the case of those carriers which are members of a controlled corporate group, the amount of net operating loss is available for offset against the taxable income of the controlled group if the controlled group elects to file a consolidated federal income tax return.

State Gross Premium Tax

The California State Constitution provides that insurance companies operating in California pay a state tax based upon their gross annual

premiums. For malpractice insurance, this tax rate is 2.35 percent of gross premiums received from business done in California. Insurance companies do not pay a tax on their income as do most other types of businesses.

For the 15-year period 1960 through 1974, the insurance industry paid the State of California approximately $10 million in medical malpractice gross premium taxes based upon estimated industry-wide earned premiums of approximately $427 million.

Under California's method of taxing insurance companies, increases in premium rates result in greater tax revenues to the state. In 1960, for example, the state collected approximately $211,000 in malpractice gross premium taxes based on estimated industry-wide earned premiums of $9 million. Due mainly to the substantial increase in malpractice insurance rates since then, the 1974 malpractice premium taxes collected by the state are estimated to be $1.7 million, based upon estimated industry-wide malpractice premiums of $73 million.

RESULTS OF PHYSICIAN SURVEY

As part of our review of malpractice insurance, we sent a questionnaire survey to 540 pgysicians. These physicians were selected at random by the California Medical Association from its directory of members in office-based practice.

- The results of a survey of physicians, conducted as a part of this review, indicate that most doctors would submit malpractice claims to binding arbitration, would join a mutual insurance group formed by doctors, and have not reclassified their practice because of high insurance costs.

We received 253 responses to the questionnaire from which the following data was compiled. Since all questions were not consistently answered and since some answers were ambiguous, the reported response groups vary in size. The survey requested yes or no answers to the following three questions:

1. Would you be willing to submit claims to binding arbitration?

	Number Responding	Percentage
Yes	231	91.3%
No	9	3.6%
Undecided	13	5.1%
Total	253	100.0%

2. Would you join a mutual insurance group formed by doctors?

	Number Responding	Percentage
Yes	153	60.5%
No	59	23.3%
Undecided	41	16.2%
Total	253	100.0%

3. Have you reclassified your practice for insurance purposes?

	Number Responding	Percentage
Yes	44	17.4%
No	179	70.8%
May	30	11.8%
Total	253	100.0%

The physician survey group answered questions as to their gross income, malpractice insurance premium, number of patients under their care and number of years in practice as follows:

Responses Refer to Policy Year 1975		Number of Physicians Responding
Average gross income before expenses of responding physicians including all specialty classes (Gross income figure may be understated since some responses appear to represent income after office expenses were deducted.)	$77,808	171
Average malpractice insurance premium paid.	$ 5,209	171
Percentage of gross income paid for malpractice insurance premium	6.69%	171
Average number of years in practice	20	171
Average number of patients under doctor's care during year	$ 2,948	253

Information was requested from the physicians on any malpractice claims filed against them, the year the incident occurred, the year the incident was filed and the final disposition of the claim. The response data appeared to be based on memory rather than a record review of and therefore possible misstatements seemed likely. However, the data showed a significant increase in both the number of claims filed and the amount per claim filed in the years 1970-74 compared to all earlier years.

INTERIM REPORT

TO THE

AUDITOR GENERAL, STATE OF CALIFORNIA

CONCERNING

MEDICAL MALPRACTICE INSURANCE STUDY

Prepared By
BOOZ, ALLEN CONSULTING ACTUARIES
A Division Of
BOOZ, ALLEN & HAMILTON, INC.

Newport Beach, California
September 2, 1975

INTERIM REPORT TO THE AUDITOR GENERAL

This report is responsive to our assignment arising out of Assembly Concurrent Resolution #83 relative to medical malpractice insurance. It is an interim report only, prepared in order to provide the Auditor General with tentative findings and conclusions prior to adjournment of the legislature in mid-September. As such, the report is based on a relatively large number of estimates and assumptions. These are identified herein, and will be confirmed or revised, to the extent feasible, in the preparation of the final report.

It is the nature of medical malpractice insurance, due to the time required to discover and settle claims, to require estimates and assumptions in projecting and evaluating claim experience. Neither that fact nor the interim nature of the report, however, undermine the basic conclusions drawn thus far in the course of our study:

- premiums paid by California doctors for medical malpractice insurance have increased dramatically over the past fifteen years, but have not kept pace with increasing claim costs

- the current malpractice crisis has been caused in part by poor pricing by the insurance industry, for premiums have increased erratically while claim cost increases have been relatively steady

- the insurance industry has collected more premium than it has paid in claims for medical malpractice insurance written in California over the past fifteen years, but future claim payments on past coverage will ultimately result in a severe net loss to the industry

- income on invested premium funds will alleviate the situation to some extent for the industry, but the net loss will remain severe

- the medical profession in California over the past fifteen years has paid an inadequate amount for its medical malpractice insurance coverage

It may aid understanding of the situation to quantify the foregoing conclusions. The following summary is presented with the explicit provision that it be accepted as a tentative estimate based on the assumptions and estimates in this report. Subject to this caveat, the aggregate statewide medical malpractice experience over the fifteen-year period of 1960 through 1974 has been developed in the course of our study to be as follows:

. income	
- premium	$450,000,000
- investment	100,000,000
- subtotal	550,000,000
. outgo	
- expenses	50,000,000
- claims paid	200,000,000
- claims to be paid	700,000,000
- subtotal	950,000,000
. net loss to industry	$400,000,000

The attached exhibits support the foregoing summary, and provide a measure of detail. They run only through 1974 and so do not reflect the tremendous premium increases faced by many doctors in 1975 and 1976. It should be noted that these increases result primarily from previous ratemaking error, and only partially from recent increases in claim costs. Once the catch-up process has been completed, and premiums once again are adequate to cover claims incurred, future premium increases may be expected to follow the claim cost trend of +27% per year. While this is a relatively severe trend and constitutes a medical malpractice problem in its own right, it is not sufficient to provoke the medical malpractice crisis brought about by premium rates which double or triple in a year. This crisis in turn, of course, pales in comparison to the situation that will prevail if all insurers stop writing medical malpractice insurance in the state.

Pending and proposed legislation may have the potential to reduce or reverse the +27% claim cost trend (which may be considered to be merely basic medical cost inflation of 15% per year coupled with annual increases of 10% in claim frequency). Action should be taken cautiously, however, for cost-effective provisions necessarily will reduce or remove benefits viewed as rights by one or more of the parties, including the public. Caution should include careful actuarial as well as legal evaluation of each provision, especially in view of the fact that cost

is the proximate cause of the problem. In the meantime, incremental premium costs can be temporarily passed on to the patient, and thus in part to group health insurance premiums and public welfare funds, where the adverse impact will be relatively small.

Data used in the study has been provided or verified by the Auditor General, for the most part, but our assumptions and conclusions have been independently developed.

Frederick W. Kilbourne, FCAS

Frederick W. Kilbourne, Fellow
Casualty Actuarial Society

EXHIBIT A
Auditor General, State of California
COVERAGE AND PREMIUMS

Calendar Year	Doctors in California (000)	Doctors in Study (000)	Study Percentage (%)	Earned Premiums ($000)	Premium Per Doctor ($)	Premium Increase (%)
1960	21	4	19%	$ 9,000	$ 400	-
1961	22	4	18	10,000	500	25%
1962	22	4	18	10,000	500	0
1963	23	10	43	9,000	400	-
1964	23	11	48	9,000	400	0
1965	24	12	50	10,000	400	0
1966	24	13	54	11,000	500	25
1967	25	15	60	13,000	500	0
1968	25	17	68	19,000	800	60
1969	25	18	72	33,000	1,300	63
1970	26	15	58	46,000	1,800	38
1971	26	14	54	55,000	2,100	17
1972	27	14	52	60,000	2,200	5
1973	27	22	81	60,000	2,200	0
1974	28	21	75	73,000	2,600	18
TOTALS	368	194	53%	$427,000	$16,600	550%

EXHIBIT B

Auditor General, State of California

EXPENSES AND CLAIMS

Calendar Year	Claims Paid ($000)	Claims Incurred ($000)	Claims Per Doctor ($)	Claim Increase (%)	Expenses Paid ($000)	Investment Income ($000)	Industry Net Gain ($000)
1960	$ 9,000	$ 9,000	$ 400	-	$ 1,000	$ 2,000	$ 1,000
1961	7,000	7,000	300	-	2,000	2,000	3,000
1962	10,000	10,000	500	67%	2,000	2,000	0
1963	11,000	12,000	500	0	1,000	2,000	- 2,000
1964	14,000	16,000	700	40	1,000	2,000	- 6,000
1965	16,000	22,000	900	29	2,000	2,000	- 12,000
1966	23,000	26,000	1,100	22	2,000	3,000	- 14,000
1967	24,000	35,000	1,400	27	2,000	3,000	- 21,000
1968	21,000	45,000	1,800	29	3,000	5,000	- 24,000
1969	20,000	58,000	2,300	28	5,000	8,000	- 22,000
1970	17,000	75,000	2,900	26	7,000	11,000	- 25,000
1971	13,000	96,000	3,700	28	8,000	13,000	- 36,000
1972	4,000	127,000	4,700	27	9,000	14,000	- 62,000
1973	1,000	162,000	6,000	28	9,000	14,000	- 97,000
1974	-	213,000	7,600	27	11,000	17,000	-134,000
TOTALS	$190,000	$913,000	$34,800	1,800%	$65,000	$100,000	$-451,000

EXHIBIT C
Auditor General, State of California
ESTIMATES AND ASSUMPTIONS

1. The aggregate statewide summary amounts in the text are rounded liberally from the totals shown in Exhibits A and B, in part to emphasize the degree of uncertainty in those totals.

2. Calendar year data was derived from policy year and accident year data by means of various assumptions primarily based on presumptive linearity.

3. Doctors in California are taken for the purpose to be all office-based doctors only, all of whom are assumed to purchase medical malpractice insurance.

4. Doctors in the study are generally those in the medical society programs, and it is assumed that their medical malpractice insurance characteristics are the same as other insured doctors.

5. Study percentages are proportions of insured doctors included in the study, and are used to project aggregate statewide amounts.

6. Earned premiums are based on premium data provided by the carriers, and are estimates intended to reflect total limits coverage as actually purchased.

7. Premiums per doctor are derived from premium and exposure data in Exhibit A, and are weighted averages intended to reflect actual distributions by company, territory, and class.

8. Premium increases relate to the preceding calendar year, and are subject to distortion in the early years of the study period due to the small average premium amounts.

9. Claims paid are based on actual payments on closed claims during the study period, including allocated loss adjustment expense, and appear to be understated for claims incurred in 1973 and 1974.

10. Claims incurred are developed from claim payment patterns by year, and are not dependent on company or other claim reserves.

11. Claims per doctor are based on claim incurred amounts and numbers of insured doctors.

12. Claim increases relate to the preceding calendar year, and to some extent reflect the smoothing process used in the development of claims incurred.

13. Expenses paid are assumed to be 15% of premiums, and to cover commissions, taxes, and company overhead.

14. Investment income is credited at about 5% per year on premiums after expenses, with funds assumed held for an average of five years.

15. The industry net gain is the excess of premium and investment income over expenses and claims, and has been a net loss over the past dozen years and so is shown as negatives.

EXHIBIT D
Auditor General, State of California
CLAIMS PAID (GRADUATED AND PROJECTED)

Calendar Year	Years 1-3	Years 4-6	Years 7-9	Years 10-12	Years 13-15	Years 1-15
1960	17	96	86	23	3	225
1961	22	124	109	30	3	286
1962	28	157	139	37	5	366
1963	36	203	178	49	5	471
1964	46	258	228	62	7	601
1965	59	331	293	79	9	771
1966	75	423	374	101	12	985
1967	96	541	479	130	15	1,261
1968	123	692	612	164	20	1,611
1969	157	886	784	211	24	2,062
1970	201	1,133	1,001	269	32	2,636
1971	257	1,449	1,282	346	40	3,374
1972	330	1,853	1,639	442	51	4,315
1973	419	2,353	2,082	561	65	5,480
1974	532	2,999	2,644	713	82	6,970

Entries show average amount of claims paid in the indicated three-year period as measured from the calendar year of coverage. The table shows, for example, that an average $139 per doctor covered in 1962 was paid in 1965, 1966, and 1967 combined. Graduation and projection was by columnar year, and includes the 27% annual increase factor found in the underlying data of Exhibit E.

EXHIBIT E
Auditor General, State of California
CLAIMS PAID (ACTUAL PAYMENTS)

Calendar Year	Years 1-3	Years 4-6	Years 7-9	Years 10-12	Years 13-15
1960	50	161	142	66	14
1961	29	100	164	31	
1962	37	197	134	93	
1963	47	206	143		
1964	91	230	205		
1965	107	246	328		
1966	175	418			
1967	165	603			
1968	188	643			
1969	261				
1970	373				
1971	497				
1972					
1973					
1974					

cc: Members of the Legislature
Office of the Governor
Office of the Lieutenant Governor
Secretary of State
State Controller
State Treasurer
Legislative Analyst
Director of Finance
Assembly Office of Research
Senate Office of Research
Assembly Majority/Minority Consultants
Senate Majority/Minority Consultants
California State Department Heads
Capitol Press Corps